Joint Claim Construction Chart
Oyster Optics, LLC v. Cisco Systems, Inc.
Case No. 2:20-cv-00211-JRG

Claim No.	U.S. Patent 6,665,500	Oyster Optics' Proposed Construction	Cisco's Proposed Construction	Court's Construction
1.	An optical data transmitter comprising: a laser; a **phase modulator** for **phase modulating** light from the light source; and a controller having an input for receiving an electronic data stream, the controller in a first **mode** controlling the **phase modulator** so as to create **phase-modulated optical signals** in the light from the laser as a function of the electronic data stream and the controller in a second alternate mode **amplitude-modulating** the light from the laser as a function of the electronic data stream, the first **mode** and the second **mode** occurring at different times.	**"phase modulating"** **"alter the phase of light to create an optical signal having a phase that is representative of data"**	**"phase modulating"** **"altering the phase of light to create an optical signal having a phase that is representative of data, where the phase modulating does not include amplitude modulating"**	**"phase modulating"**
		"phase-modulated optical signals" **"phase modulate" should be construed as set forth above. Otherwise, no construction necessary.**	**"phase-modulated optical signals"** **"optical signals created by phase modulation, not amplitude modulation"**	**"phase-modulated optical signals"**
		"amplitude-modulating" **"altering the amplitude of light to create an optical signal**	**"amplitude-modulating"** **"altering the amplitude of light to create an optical signal having an amplitude**	**"amplitude-modulating"**

		that is representative of data"	**that is representative of data, where the amplitude modulating does not include phase modulating"**	
		"mode" **No construction necessary**	**"mode"** **"period during which at least one specific optical data signal is either amplitude modulated or phase modulated, but not both"**	**"mode"**
16.	A dual-mode optical transmission system comprising: a transmitter having a laser for transmitting **amplitude-modulated signals** in a first **mode** and p**hase-modulated signals** in a second **mode** and a controller for switching an output of the laser between the first **mode** and the second **mode**, the second **mode** occurring at a different time than the first **mode**; an optical fiber connected to the transmitter; and	**"phase-modulated signals"** **"phase modulate" should be construed as set forth above. Otherwise, no construction necessary.**	**"phase-modulated signals"** **"optical signals created by phase modulation, not amplitude modulation"**	**"phase-modulated optical signals"**
		"amplitude-modulated signals" **"amplitude modulate" should be construed as set forth above.**	**"amplitude-modulated signals"** **"optical signals created by amplitude**	**"amplitude-modulated signals"**

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	a receiver having an interferometer being connected to the optical fiber.	**Otherwise, no construction necessary**	**modulation, not phase modulation"**	
		"mode" **No construction necessary**	**"mode"** **"period during which at least one specific optical data signal is either amplitude modulated or phase modulated, but not both"**	**"mode"**
17.	A method for transmitting optical data in two **modes** comprising the steps of: **phase modulating** light from a laser during a first transmission **mode** so as to transmit **phase-modulated optical data**; and **amplitude modulating** light from the laser during a second alternate transmission **mode** so as to transmit **amplitude-modulated optical data**, the second alternate transmission **mode** occurring at a time separate from the first transmission **mode**.	**"phase modulating"** **"alter the phase of light to create an optical signal having a phase that is representative of data"**	**"phase modulating"** **"altering the phase of light to create an optical signal having a phase that is representative of data, where the phase modulating does not include amplitude modulating"**	**"phase modulating"**
		"phase-modulated optical data" **"phase modulate" should be construed as set forth above. Otherwise, no**	**"phase-modulated optical data"** **"optical signals created by phase modulation, not**	**"phase-modulated optical data"**

		construction necessary.	**amplitude modulation”**	
		“amplitude modulating” **“altering the amplitude of light to create an optical signal that is representative of data” Otherwise, no construction necessary.**	**“amplitude modulating”** **“altering the amplitude of light to create an optical signal having an amplitude that is representative of data, where the amplitude modulating does not include phase modulating”**	**“amplitude modulating”**
		“amplitude-modulated optical data” **“amplitude modulate” should be construed as set forth above. Otherwise, no construction necessary**	**“amplitude-modulated optical data”** **“optical signals created by amplitude modulation, not phase modulation”**	**“amplitude-modulated optical data”**
		“mode” **No construction necessary**	**“mode”** **“period during which at least one specific optical data signal is either amplitude modulated or phase**	**“mode”**

			modulated, but not both"	

Claim No.	**U.S. Patent 8,913,898**	**Oyster Optics' Proposed Construction**	**Cisco's Proposed Construction**	**Court's Construction**
1.	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the transceiver card comprising: **a transmitter having a laser, a modulator, and a controller** configured to receive **input data** and control the modulator to generate a first optical signal as a function of the **input data**; a fiber output optically connected to the transmitter and configured to optically connect the first optical fiber to the transceiver card; a **receiver** configured to receive a second optical signal from the second optical fiber and to convert **the second optical signal** to **output data**; fiber input optically connected to the **receiver** and configured to optically	**"receiver"** **[AGREED]**	**"receiver"** **[AGREED]**	**"receiver"** **"receiver without a demodulator"**
		"the second optical signal" **[AGREED]**	**"the second optical signal"** **[AGREED]**	**"the second optical signal"** **"'a second optical signal' is antecedent for "the second optical signal'"**
		"output data" **"data outputted by the receiver"**	**"output data"** **"the data encoded in the second optical signal and outputted by the receiver"**	**"output data"**
		"input data" **"data inputted to the transmitter"**	**"input data"** **"the data inputted to the transmitter and**	**"input data"**

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	connect the second optical fiber to the transceiver card; and an energy level detector optically connected between the **receiver** and the fiber input to measure an energy level of **the second optical signal**, wherein the energy level detector includes a plurality of thresholds.		**encoded in the first optical signal"**	
		"a transmitter having a laser, a modulator, and a controller" **No construction necessary.**	**"a transmitter having a laser, a modulator, and a controller"** **"transmitter containing a laser, a modulator, and a controller"**	**"a transmitter having a laser, a modulator, and a controller"**
3.	The transceiver card as recited in claim 1 wherein the modulator is a **phase modulator.**	"**phase modulator"** **[AGREED]**	"**phase modulator"** **[AGREED]**	"**phase modulator"** **"alter the phase of light to create an optical signal having a phase that is representative of data. Use of phase modulation excludes the use of amplitude modulation."**
4.	The transceiver card as recited in claim 3 wherein **the second optical signal** comprises a **phase modulated optical signal.**	**"phase modulated optical signal"** **[AGREED]**	**"phase modulated optical signal"** **[AGREED]**	**"phase modulated optical signal"** **"alter the phase of light to create an optical signal having a phase that is representative of data. Use of phase modulation excludes**

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				the use of amplitude modulation."
		"the second optical signal" **[AGREED]**	**"the second optical signal"** **[AGREED]**	**"the second optical signal"** **'"a second optical signal' is antecedent for "the second optical signal'"**
10.	The transceiver card as recited in claim 1 wherein the plurality of thresholds indicate a drop in amplitude of a **phase-modulated signal**.	**"phase-modulated signal"** **[AGREED]**	**"phase-modulated signal"** **[AGREED]**	**"phase-modulated signal"** **"alter the phase of light to create an optical signal having a phase that is representative of data. Use of phase modulation excludes the use of amplitude modulation."**
14.	A transceiver card for a telecommunications box for transmitting data over a first optical fiber and receiving data over a second optical fiber, the transceiver card comprising: **a transmitter having a laser, a modulator, and a controller** configured to receive **input data** and control the	**"receiver"** **[AGREED]**	**"receiver"** **[AGREED]**	**"receiver"** **"receiver without a demodulator"**
		"the second optical signal" **[AGREED]**	**"the second optical signal"** **[AGREED]**	**"the second optical signal"**

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	modulator to generate a first optical signal as a function of the **input data**; a fiber output optically connected to the transmitter and configured to optically connect the first optical fiber to the transceiver card; a **receiver** configured to receive a second optical signal from the second optical fiber and to convert **the second optical signal** to **output data**; a fiber input optically connected to the **receiver** and configured to optically connect the second optical fiber to the transceiver card; and an energy level detector configured to measure an energy level of the second optical signal, the energy level detector including a threshold indicating a drop in amplitude of **the second optical signal**.			**‘“a second optical signal’ is antecedent for “the second optical signal’”**
		“output data” **“data outputted by the receiver”**	**“output data”** **“the data encoded in the second optical signal and outputted by the receiver”**	**“output data”**
		“input data” **“data inputted to the transmitter”**	**“input data”** **“the data inputted to the transmitter and encoded in the first optical signal”**	**“input data”**
		“a transmitter having a laser, a modulator, and a controller” **No construction necessary.**	**“a transmitter having a laser, a modulator, and a controller”** **“transmitter containing a laser, a modulator, and a controller”**	**“a transmitter having a laser, a modulator, and a controller”**
17.	The transceiver card as recited in claim 14 wherein the modulator is a **phase modulator**.	“**phase modulator”** **[AGREED]**	“**phase modulator”** **[AGREED]**	“**phase modulator”** **“alter the phase of light to create an**

				optical signal having a phase that is representative of data. Use of phase modulation excludes the use of amplitude modulation."
18.	The transceiver card as recited in claim 14 wherein the second optical signal comprises a **phase-modulated optical signal**.	**"phase-modulated optical signal"** **[AGREED]**	**"phase-modulated optical signal"** **[AGREED]**	**"phase-modulated optical signal"** **"alter the phase of light to create an optical signal having a phase that is representative of data. Use of phase modulation excludes the use of amplitude modulation."**

Claim No.	**U.S. Patent 10,205,516**	**Oyster Optics' Proposed Construction**	**Cisco's Proposed Construction**	**Court's Construction**
1.	A telecommunications apparatus, comprising: an optical **receiver** affixed to a printed circuit board and configured to receive an optical data signal from an optical fiber of	**"receiver"** **[AGREED]**	**"receiver"** **[AGREED]**	**"receiver"** **"receiver without a demodulator"**
		"voltage"	**voltage"**	**"voltage"**

	an optical fiber telecommunications system; an energy level detector circuit, optically coupled to the optical fiber upstream from the optical **receiver**, wherein the energy level detector circuit is configured to monitor an energy level of the optical data signal and generate an alarm based on the energy level and one or more energy level thresholds, wherein the energy level detector circuit includes: a photodetector to generate a photodetector **voltage** indicative of an energy level of the optical data signal; and one or more comparators corresponding to the one or more energy level thresholds, wherein each of the one or more comparators: includes a first input coupled to an output **voltage** indicative of the photodetector **voltage**; includes a second input coupled to a corresponding reference **voltage**; and generates a comparator signal indicative of a comparison between the	**Plain and ordinary meaning, or, in the alternative, "difference in electrical potential expressed in volts."**	**"electric pressure that causes current to flow in a circuit"**	

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	corresponding reference **voltage** and the output **voltage**.			
6.	The telecommunications apparatus of claim 1, wherein the optical data signal comprises a **phase-modulated optical data signal** and wherein the optical **receiver** is configured to obtain data from the **phase-modulated optical data signal**.	**"receiver"** **[AGREED]** **"phase-modulated optical data signal"** **[AGREED]**	**"receiver"** **[AGREED]** **"phase-modulated optical data signal"** **[AGREED]**	**"receiver"** **"receiver without a demodulator"** **"phase-modulated optical data signal"** **"alter the phase of light to create an optical signal having a phase that is representative of data. Use of phase modulation excludes the use of amplitude modulation."**
7.	The telecommunications apparatus of claim 1, wherein the optical data signal comprises an amplitude-modulated optical data signal and wherein the optical **receiver** is configured to obtain data from the amplitude-modulated optical data signal.	**"receiver"** **[AGREED]**	**"receiver"** **[AGREED]**	**"receiver"** **"receiver without a demodulator"**